

World Renowned Research Center Selects TNSC's SR-4000HT MOCVD Reactor for Deep Ultra Violet Light Emitting Diode (UVLED) Development

Basking Ridge, NJ – March 16, 2016 – Matheson Tri-Gas, Inc., together with its parent company, Taiyo Nippon Sanso Corporation (TNSC), has announced that the Solid State Lighting & Energy Electronics Center (SSLEEC), the world renowned research center at the University of California, Santa Barbara, installed an SR-4000HT grade gallium nitride (GaN) metal organic chemical vapor deposition (MOCVD) reactor for its continued compound semiconductor device developmental work for UVLED. SSLEEC is co-directed by Nobel Prize-winning Professor Shuji Nakamura and Professor Steven DenBaars.

The unique design of the SR-4000HT assists in growing high-aluminum content devices at high growth rates, while operating at higher than 40kPa pressures and elevated temperatures.

According to Professor Nakamura, “We have already obtained preliminary growth results which demonstrate the unrivaled performance of the SR-4000HT reactor. Our students and faculty members are very excited by these results. We look forward to using the MOCVD reactor from TNSC to grow the high quality III-Nitride-based materials and devices.”

Koh Matsumoto, (CSE Division Manager, TNSC) stated, “We are proud that UCSB has chosen our reactor for their advanced research. We believe that the designed features of our reactor, which enable well-controlled vapor phase reactions, will allow UCSB to enjoy a large process window to develop their devices.”

About University of California Santa Barbara

The Solid State Lighting & Energy Electronics Center (SSLEEC) at UCSB is a new collaborative center, which partners key industry leaders and UCSB researchers to advance solid-state lighting and energy efficient power switching using wide-bandgap semiconductors. Under the leadership of Professors Steven DenBaars and Shuji Nakamura, Umesh Mishra and James Speck, SSLEEC has demonstrated an outstanding achievement as is verified by its key patent portfolio of >150 patents over the past 6 years and 430+ publications since 2007.

About Taiyo Nippon Sanso Corporation/MATHESON

Taiyo Nippon Sanso Corporation, founded in 1910 and based in Tokyo, Japan, is a global supplier of industrial gases. In 1983, TNSC launched MOCVD operations alongside its conventional industrial gas operations. MATHESON is a single source for industrial, welding and safety supplies, medical, specialty and electronic gases, gas handling equipment, high performance purification systems, engineering and gas management services, as well as on-site gas generation. Its mission is to deliver innovative solutions that meet global customer requirements. MATHESON is the largest subsidiary of the Taiyo Nippon Sanso Corporation Group, one of the five largest suppliers of industrial, specialty and electronics gases in the world.

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